CONFIDENTIAL

552A

5 May 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Trip to [redacted] for monitoring the Model 552 & 552A on 1 May 1964 25X1

Attendees:

[redacted] 25X1

1. The Chip Comparator was briefly discussed. [redacted] disclosed two problem areas: 25X1

a. There is a low amplitude, high frequency vibration induced by carriage motion in either x or y which exceeds the band width of the interferometer.

b. The vacuum grooved glass plates, as delivered by [redacted] have not met the required flatness specifications. [redacted] hopes to solve these problems in time to make delivery by 10 May 1964. 25X1 25X1

2. [redacted] announced the following delivery schedule for the Model 552 & 552 s: 25X1

| | | | |
|---|---|---|---|
| a. | 552A1 | 17 August 1964 | PAG Viewer |
| b. | 552 | 15 September 1964 | TAB/SPTD |
| c. | 552A2 | 1 October 1964 | PID Viewer |
| d. | 552A3 | 1 December 1964 | Navy Viewer |
| e. | 552A4 | 1 January 1965 | Army Viewer |



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[redacted] has asked Logistics for a 30 day extension on the Model 552 to incorporate the mensuration components. [redacted] claims that this is only for their protection and that they will still attempt to deliver on the 15th of September as planned. 25X1 25X1

3. [redacted] discussed the 387 Viewer and High Intensity Light Table developments respectively. 25X1

4. We viewed a mock-up of the Control Console consisting of a partially completed cabinet fitted with a radial saw boom and a plywood simulation of the eyepiece assembly. Eyepiece attitude rotation is now accomplished through linkages between the boom and the eyepiece assembly. The elevation position motion was altered by a crank on the operators end of the boom -- this motion didn't work properly. There was considerable discussion on the location of the controls -- a degree of agreement was attained, but there was some confusion as to the total number and type of controls required. A composite list of controls was requested and will be furnished by [redacted] in the near future. The rough coordinate readout counters will be transferred to the control console. Hand wheels for film advance will be tight against the edge of the top and will not protrude above the top and intrude upon the work area. The contractor was informed that a crank with a folding handle must be provided. 25X1

Rotation knobs with counters for joystick direction control are planned; however, the location has not been decided. The knobs and their associated drive linkages will be purely mechanical.

The physical position of the joystick on the console was examined. [redacted] was directed to move the stick to the rear as far as possible. The speed control button is to be removed from the joystick and placed on the control console. The present three-position, push button saddle switch atop the joystick will be replaced with a single two-position push button switch. This is to be supplemented with an auxillary, fixed, three-position switch on the control console. The three position switch is in effect a channel selector -- right, left or both. The two-position switch will be utilized as a trim switch during stereo-scanning. 25X1

5. One pair of 3/4" fiber optics cables with the new plastic casings had been received and were available for our examination. These cables appeared to be of good quality.

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6. Examples of the smallest size laser marks, again, were not available. The laser is still inoperable.

7. The contractor is still working on the problem of producing an optimum vacuum grove for film hold down nor has an acceptable transparent vacuum manifold been developed. When the groove is deepended the hold down occurs with the 10 sec. limit but the grooves are not acceptable optically. If we have to compromise, we will give up time (hold-down speed) to obtain optical quality. The plates have been sent back to the vendor for further polishing.

8. [redacted] claims that they can obtain an acceptable solution to the low power illumination through the use of a field lens between the film and the objective. We are still doubtful. Chitayat claims that they are currently obtaining 600ft. lamberts on the lens bench mock-up. 25X1

9. [redacted] discussed the optimization of the image integrator scan. [redacted] claims there is no simple solution to the problem but that they will investigate it. 25X1 25X1

10. The new joystick mechanism was available for examination in an early assembly stage. It requires additional design work before it will be acceptable.

11. Questions concerning contemplated velocity ranges resulted in the following answers:

a. .01" - 1" per sec. with a .004" increment in the low range.

b. .0001" - .01" per sec. with a .0004" increment in the low range.

Incorporation of the 2.5mm ball screw may reduce the maximum slew speed obtainable with the stepping motors to .75" per sec.

[redacted] 25X1

Development Branch, P&DS